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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,459	03/27/2004	Julian James Orbach	403047-A-01-US (Orbach)	9320
7590	09/18/2007	John C. Moran, Attorney, P.C. 4120 E. 115 Place Thornton, CO 80233	EXAMINER NGUYEN, KHAI N	
ART UNIT	PAPER NUMBER		2614	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/810,459	ORBACH, JULIAN JAMES
	Examiner	Art Unit
	Khai N. Nguyen	2609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 27 March 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-37 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-37 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 27 March 2004 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>March 27, 2004</u> . | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on March 27, 2004 was filed for this instant application. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Title

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested:

Method and apparatus to use acoustic or body heat to detect the presence of a person.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, and 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Castile et al. (U.S. Patent Number 5,828,626).

Regarding claim 1, Castile et al teach a method for detecting presence of a user (**Fig. 1 – 22 “a human”**) at a telecommunication terminal, comprising the steps of:

testing acoustic paths communicating audio information from and back to the telecommunication terminal (**Fig. 1 – 12 “transmitter”, 14 “receiver”, and 16, 19, 21 “acoustic signal paths”, col. 2 lines 36-43**); and

determining the presence of the user based on changes in the acoustic paths (**Fig.1 – 22 “a human”, col. 3 lines 5-11**).

Regarding claim 2, Castile et al teach a method wherein the step of testing comprises the steps of forming a model of the acoustic paths (**Fig. 1 –12, 14 – col. 3 lines 35-52 and equation (1) “model of the acoustic paths”**);

detecting modifications in the acoustic paths to update the model of the acoustic paths (**col. 3 lines 63-65**); and

the step of determining comprises the step of using the detected modifications to determine changes in the acoustic paths (**col. 3 lines 56-62**).

Regarding claim 3, Castile et al teach a method wherein the step of detecting comprises the steps of applying audio information transmitted from the telecommunication terminal to the model of the acoustic paths (**Fig. 1 – 12 “transmitter” – col. 2 lines 59-61**);

receiving the transmitted audio information back by the telecommunication terminal via the acoustic paths (**Fig. 1 –14 “receiver” – col. 2 lines 41-42, i.e., microphone, col. 3 lines 12-13**);

determining a difference between an output of the model of acoustic paths from the received audio information (**col. 3 lines 60-62**); and

calculating a correction to the model of the acoustic paths using the difference and transmitted audio information (**col. 3 lines 63-65**).

Regarding claims 4 and 11, Castile et al teach a method and a apparatus wherein the audio information is at one of within human hearing, above human hearing and below human hearing (**Fig. 1 – col. 2 lines 36-43, i.e., acoustic signals detection system (e.g., acoustic signals range from infrasound to ultrasound)**).

Regarding claim 5, Castile et al teach a method wherein the step of determining the presence comprises the steps of developing the model of the acoustic paths with the user presence and not presence at the telecommunication terminal (**Fig. 3 – 58 Comparator – col. 5 lines 21-27**); and

calculating a threshold of changes in the model of the acoustic paths that represents the presence or non-presence of the user at the telecommunication terminal (**Fig. 3 – 68 “threshold gate” – col. 6 lines 16-22, and lines 26-28**).

Regarding claim 9, Castile et al teach an apparatus for detecting presence of a user at a telecommunication terminal, comprising:

a transmitter for transmitting audio information (**Fig. 1 – 12 “Transmitter”, Fig. 3 – 56 “Transmitted signal” – col. 5 lines 1-4**);
a receiver for receiving the transmitted audio information via acoustic paths (**Fig. 1 – 14 “Receiver”, Fig. 3 – 52 “Microphone”, col. 5 lines 6-8**) ;
a model of the acoustic paths for using the audio information before transmission and for producing an audio output (**Fig. 3 – 60 “Sample and Hold”, col. 5 lines 12-15, and lines 29-32**);
a comparator for determining a difference between the audio output and received audio information (**Fig. 3 – 58 “Window Comparator”, col. 5 lines 21-26**);
a modifier for iteratively generating modifications for the model of the acoustic paths in responsive to the difference and audio information before transmission (**Fig. 3 – 60 “Sample and Hold”, col. 5 lines 29-32**); and
a controller responsive to the modifications for detecting the presence or non-presence of the user at the telecommunication terminal (**Fig. 3 – 62 “Clock”, col. 5 lines 35-43**).

Regarding claim 10, Castile et al teach an apparatus wherein the controller further configured for determining modifications when the user is presence and when the user is not presence (**Fig. 3 – 60, 62 – col. 5 lines 29-32, i.e., trigger to store new values “modifications”**); and

the controller calculating a threshold from the determined modifications indicating the presence or non-presence of the user (**Fig. 3 – 60-64, col. 6 lines 1-15**).

Regarding claim 12 Castile et al teach an apparatus wherein the type of the audio information is controlled by the controller (**col. 5 lines 54-66**).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 13-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Michaelis (U.S. Pub. Number 2004/0022394 A1).

Regarding claim 13, Michaelis teaches an apparatus for detecting presence of a user at a telecommunication terminal (**Figs. 1A-C**), comprising:

an echo canceller for canceling echoes caused by acoustic paths to audio information from and back to the echo canceller (**Figs. 2A-B – paragraph [0024] lines 1-9, and paragraph [0024] lines 14-17, i.e., echo canceller at a communication server or a switch**); and

a controller responsive to changes in the echo canceller for determining the presence and non-presence of the user at the telecommunication terminal (**Figs. 2A-B – paragraph [0024] lines 11-13**).

Regarding claims 14 and 19, Michaelis teaches an apparatus wherein the audio information is at one of within human hearing, above human hearing and below human hearing (**paragraph [0007] lines 3-4, i.e., acoustic reverberation or echo (e.g., acoustic signals range from infrasound to ultrasound)**).

Regarding claims 15 and 20, Michaelis teaches an apparatus wherein the type of the audio information is controlled by the controller (**Figs 2A-B – 216 “Processor”, paragraph [0025] lines 7-9**).

Regarding claims 16 and 21, Michaelis teaches an apparatus wherein the echo canceller/echo detector comprises a model of the acoustic paths (**Figs. 1A-C, paragraph [0023] lines 23-25, and paragraph [0024] lines 14-17, i.e., echo canceller at a communication server or a switch**);

a modifier for generating modifications to the model based on changes to the acoustic paths (**Figs. 2A-B, paragraph [0025] lines 3-6**); and

the controller responsive to the generated modifications for determining the presence or non-presence of the user at the telecommunication terminal (**Figs. 2A-B, paragraph [0025] lines 3-9**).

Regarding claims 17 and 22, Michaelis teaches an apparatus wherein the modifier responsive to a difference in an output of the model of the acoustic paths to audio information before transmission from the echo canceller/echo detector and received audio information via the acoustic paths for generating the modification based on the difference and the audio information before transmission (**Figs. 2A-B – paragraph [0025] lines 1-9**).

Regarding claim 18, Michaelis teaches an apparatus for determining presence of a user at a telecommunication terminal (**Figs. 1A-C**), comprising:

- an echo detector for detecting echoes caused by acoustic paths to audio information from and back to the echo detector (**Figs. 2A-B – 208 “echo detector” – paragraph [0024] lines 1-9**); and
- a controller responsive to changes in the echo detector for determining the presence and non-presence of the user at the telecommunication terminal (**Figs. 2A-B – paragraph [0024] lines 11-13, and lines 28-31**).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 23-29 rejected under 35 U.S.C. 102(b) as being anticipated by Davidson et al. (U.S. Patent Number 4,932,050).

Regarding claim 23, Davidson et al. teach a method detecting presence of a user at a telecommunication terminal (**Figs. 2-3 – col. 3 lines 11-13**), comprising the steps of:

testing for human heat being radiated to the telecommunication terminal (**Figs. 2-3 – 201/211 “Infrared Sensor” in the analog and ISDN telecommunication terminals, col. 3 lines 26-28**); and

determining the presence of the user based on changes in the radiated human heat (**Figs. 2-3 – col. 5 lines 59-66**).

Regarding claim 24, Davidson et al. teach a method wherein the step of determining the presence comprises the steps of detecting human heat with the user presence and not presence at the telecommunication terminal (**Fig. 3 – col. 6 lines 51-55**); and

calculating a threshold of changes in the human that represent the presence or non-presence of the user at the telecommunication terminal (**Fig. 3 – col. 6 lines 60-64**).

Regarding claim 25, Davidson et al. teach a method further comprises the step of performing telecommunication operations by the telecommunication terminal in

responsive to the presence or non-presence of the user at the telecommunication terminal (**Fig. 1 – 100 “Switching System”, Fig. 3 – 151 “line to switching system”, col. 6 lines 60-68, and col. 7 lines 1-3**).

Regarding claim 26, Davidson et al. teach a method wherein the telecommunication operations are send-all-calls (**Fig. 6 – col. 8 lines 26-28, i.e., call forwarding**).

Regarding claim 27, Davidson et al. teach a method further comprises the steps of controlling the telecommunication terminal by a telecommunication switching system (**Fig. 1 – 100 “Switching System”**);

signaling the telecommunication switching system by the telecommunication terminal of the presence or non-presence of the user at the telecommunication terminal (**Fig. 1, Fig. 3, Fig. 5, col. 7 lines 39-41, i.e., Q.931 protocol for signaling – “presence” and lines 49-51 “Q.931- non-presence”**); and

performing telecommunication operations by the telecommunication switching system in response to the presence or non-presence of user at the telecommunication terminal (**Fig. 5 – 100 “Switching System” – col. 8 lines 8-13**).

Regarding claim 28, Davidson et al. teach an apparatus for detecting presence of a user at a telecommunication terminal (**Figs. 2-3**), comprising:

a heat sensor for detecting human heat (**Figs. 2-3 – 201 and 211 “Infrared Sensor”, col. 5 lines 59-61, and col. 6 lines 53-55**); and
a controller responsive to changes in the human heat for determining the presence and non-presence of the user at the telecommunication terminal (**Figs. 2-3 – 162 and 172 “Proximity Detection Device Circuitry”, col. 5 lines 55-64, and col. 6 lines 51-65**).

Regarding claim 29, Davidson et al. teach the apparatus wherein the controller further configured for determining changes in human heat when the user is presence and when the user is not presence (**Figs. 2-3 – 162 and 172 “Proximity Detection Device Circuitry”, col. 5 lines 55-64, and col. 6 lines 51-65**); and

the controller calculating a threshold from the determined changes indicating the presence or non-presence of the user (**Figs. 2-3 – 162 and 172 “Proximity Detection Device Circuitry”, col. 5 lines 55-64, and col. 6 lines 51-65**);

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 6-8, and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Castile et al. (U.S. Patent Number 5,828,626), and further in view of Davidson et al. (U.S. Patent Number 4,932,050).

Regarding claims 6-8 and 35-37, Castile et al. disclose everything claimed as applied above (**see claim 1**). However, Castile et al. fail to include the steps of performing telecommunication operations, controlling the terminal by a switching system (i.e., operations are send-all-calls, signaling a switching system by the terminal, and performing operations by a switching system in response to the terminal) and a processor-readable medium comprising processor-executable instructions. Although Castile et al. teach an alarm signal is generated in responsive to the presence or non-presence of the user at the terminal (**Castile et al. – column 2, lines 5-10**), and the method can be implemented with digital components (**Castile et al. – col. 5 lines 4-6**).

In the same field of endeavor, Davidson et al. teach the method and system to detect the presence or non-presence of the user at the terminal and communicated with a switching system (**Davidson et al. – column 3, lines 7-13**) that include the telecommunication operations of send-all-calls (**Davidson et al. – Fig. 6, column 8, lines 26-28, i.e., all calls are forwarded**), signaling a switching system (**Davidson et al. - Fig. 1, Fig. 3, Fig. 5, col. 7 lines 39-41, i.e., Q.931 protocol for signaling – “presence” and lines 49-51 “Q.931- non-presence”**), performing operations by a switching system in response to the terminal (**Davidson et al. - Fig. 5 – 100 “Switching System” – col. 8 lines 8-13**), and the processor-readable memory with call processing program to detect the presence or non-presence of the user at the terminal

and communicated with a switching system (**Davidson et al. – Fig. 5 – 115 “Memory” – col. 8 lines 8-10, Fig. 6 “Flowchart” – col. 8 lines 26-28**). The advantage of Davidson et al. is the “user presence or non-presence” information is transmitted to a switch over the same line used the terminal (**Davidson et al. – column 2, lines 1-7**), and the call processing program improving call forward feature, querying the switch for a person status, etc., (**Davidson et al. – col. 8 lines 16-25**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide Castile et al. with the telecommunication operations, signaling and controlling by a switching system, and with the processor-readable memory for call processing program.

11. Claims 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Castile et al. (U.S. Patent Number 5,828,626), and further in view of Davidson et al. (U.S. Patent Number 4,932,050).

Claim 30. A processor-readable medium for detecting presence of a user at a telecommunication terminal, comprising processor-executable instructions configured for:

testing acoustic paths communicating audio information from and back to the telecommunication terminal; and
determining the presence of the user based on changes in the acoustic paths.

Regarding claim 30, Castile et al. disclose a method for detecting presence of a user (**Castile et al. - Fig. 1 – 22 “a human”**) at a telecommunication terminal, comprising the steps of:

testing acoustic paths communicating audio information from and back to the telecommunication terminal (**Fig. 1 – 12 “transmitter”, 14 “receiver”, and 16, 19, 21 “acoustic signal paths”, col. 2 lines 36-43**); and

determining the presence of the user based on changes in the acoustic paths (**Fig. 1 – 22 “a human”, col. 3 lines 5-11**).

However, Castile et al. do not disclose in detail about a processor-readable medium comprising processor-executable instructions. Although, Castile et al. disclosed the method can be implemented with digital components (**Castile et al. – col. 5 lines 4-6**).

In the same field of endeavor, Davidson et al. teach the processor-readable memory and call processing program to detect the presence or non-presence of the user at the terminal and communicated with a switching system (**Davidson et al. – Fig. 5 – 115 “Memory” – col. 8 lines 8-10, Fig. 6 “Flowchart” – col. 8 lines 26-28**). The advantage of Davidson et al. are improving call forward feature, querying the switch for a person status, etc., (**Davidson et al. – col. 8 lines 16-25**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide Castile et al. with the processor-readable memory and call processing program to implement their method.

Regarding claims 31-34, Castile et al. disclose everything claimed as applied above (**see claims 2-5**). However, Castile et al. fail to include the detail about a processor-readable medium comprising processor-executable instructions. Although, Castile et al. disclosed the method can be implemented with digital components (**Castile et al. – col. 5 lines 4-6**).

Again, Davidson et al. teach the processor-readable memory and call processing program to detect the presence or non-presence of the user at the terminal and communicated with a switching system (**Davidson et al. – Fig. 5 – 115 “Memory” – col. 8 lines 8-10, Fig. 6 “Flowchart” – col. 8 lines 26-28**). The advantage of Davidson et al. are improving call forward feature, querying the switch for a person status, etc., (**Davidson et al. – col. 8 lines 16-25**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide Castile et al. with the processor-readable memory and call processing program to implement their method.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kaneda (U.S. Patent 5,208,864) teaches a method and system for detecting acoustic signal.

Dent et al. (U.S. Patent 5,680,450) teach a method and system for canceling acoustic echoes in a speakerphone application.

Chia et al. (U.S. Pub. 2002/0132647 A1) teach a method and system for eliminating echoes in mobile phone.

Benesty et al. (U.S. Pub. 2003/0185402 A1) teach a method and system for managing distortion for use with an acoustic echo canceller.

Hoshuyama et al. (U.S. Pub. 2004/0018860 A1) teach a method and system for suppressing echo in hand-free speech application.

Formosa (U.S. Patent 6,154,525) teaches a method and system to use body heat detection to activate call forwarding feature.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khai N. Nguyen whose telephone number is (571) 270-3141. The examiner can normally be reached on Monday - Thursday 6:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Eisen can be reached on (571) 272-7687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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KNN
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